APPLICATION FOR UNITED STATES LETTERS PATENT

ON INVENTION FOR:

VESSEL FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP FRIED FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF

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TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN that I, Franklin Wang, a citizen of THE UNITED STATES OF AMERICA and resident of: Bellerose, NY 11426 and Rosaline K. Wang, a citizen of THE UNITED STATES OF AMERICA and resident of: Bellerose, NY 11426 have invented certain new and useful improvements in a(n): VESSEL FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP FRIED FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF of which the following is a full, clear, concise and exact description:

Inventors: Franklin Wang and Rosaline K. Wang

Invention: VESSEL FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP FRIED FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF

DOC. No.: WANF80A

BACKGROUND OF THE INVENTION

Field of the Invention:

The present invention relates to a vessel. More particularly, the present invention relates to a vessel for separating and collecting excess oil from deep fried foods disposed therein before the deep fried foods are sauted.

Description of the Prior Art:

Numerous innovations for articulating food related vessels have been provided in the prior art that will be described. Even though these innovations may be suitable for the specific individual purposes to which they address, however, they differ from the present invention.

A FIRST EXAMPLE, U.S. Patent No. 5,562,025 to Bull et al. teaches a salad spinner comprising a bowl, a colander adapted to nest within the bowl, and a lid for the bowl and colander. Drive means are associated with the lid for rotating the colander relative to the bowl. The drive means include a handle having one end for manual engagement with the opposite end of the handle being pivotably mounted to the lid. A drive gear is positioned at the opposite end of the handle, and a turret is positioned on the underside of the lid. The turret is rotatably attached to the lid and a pinion gear is provided in driving engagement with the turret. This pinion gear meshes with the drive gear whereby movement of the handle transmits movement to the turret through the pinion gear. Drive tabes are carried by the turret for engaging the colander to impart spinning movement to the colander in response to movement of the handle.

A SECOND EXAMPLE, U.S. Patent No. 5,865,109 to Bull teaches a drive mechanism for relatively rotatable components such as a salad spinner comprising a bowl, a colander adapted to rest within the bowl, a lid for the bowl and colander, and a drive mechanism associated with the lid and operatively connected to the colander for rotating the colander relative to the bowl. The drive mechanism includes a handle and a drive gear associated with the handle rotatably attaching the turret to the lid, a pinion gear in driving engagement with the turret, and a clutch interposed between the pinion gear and the turret. The pinion gear meshes with the drive gear whereby movement of the handle in one direction engages the clutch to transmit movement to the turret for spinning of the colander in one direction. Movement of the handle in the opposite direction disengages the clutch. The clutch comprises a clutch housing and a clutch assembly receivable within the clutch housing. The clutch assembly includes a central hub, a plurality of drive pins, flexible arms connecting the drive pins to the central hub, and tensioning petals attached to the central hub for engagement with the turret. Recesses defined by the clutch housing receive the drive pins and these recesses slope inwardly toward the central hub. An engagement surface defined by the turret is received within the clutch housing and the petals operate to move the pins inwardly along the recesses and into driving engagement with the engagement surface when the handle is moved in one direction and outwardly along the recesses and out of driving engagement when the handle is moved in the opposite directions.

A THIRD EXAMPLE, U.S. Patent No. 5,904,090 to Lillelund et al. teaches a salad spinner having a base which receives a basket for rotation therein. A cover mounts to the base and includes a drive plate which engages the basket to drive same. The basket includes an upper edge spaced closely to the base for stability. The basket further includes one or more access depressions permitting a user to insert a finger between the basket and base. The drive plate includes one or more drive projections which abut against the access depressions, permitting these

access depressions to also be used as a portion of the drive train. The cover may be inverted to an inoperative position for reduced storage space, and a storage cap may be secured to the base to store the salad spinner, of simply the contents of the base, free from contamination.

A FOURTH EXAMPLE, U.S. Patent No. 6,343,546 B2 to Ancona et al. teaches an electric salad spinner device which is designed for ease of use and allows for efficient drying of salad greens, leafy vegetables and the like. The device comprises a base component, a generally cylindrical basket component, a generally cylindrical basket component, a scalable lid having a handle, an on/off switch and a drive motor. Optionally, the device also comprises a liquid dispenser assembly which may also be motorized to provide agitation and may also comprise a sheer assembly to allow for slicing in of hard vegetables such as, for example, cucumbers, carrots, celery and the like.

A FIFTH EXAMPLE, U.S. Patent No. 6,523,457 B1 to Ancona et al. teaches a pasta machine that includes a housing with a removable container for holding a liquid such as water, and the housing includes a heater for heating the liquid to a boiling state. An enclosed colander having a cover and holding a food product such as pasta is disposed on the container and includes arms to allow it to rotate through the boiling water. The housing of the pasta machine includes a suitable control mechanism that controls rotation of the colander through the boiling water to cook the food product within the colander. The number of rotations and intervals between rotation are a function of the type and amount of pasta within the colander.

It is apparent that numerous innovations for articulating food related vessels have been provided in the prior art that are adapted to be used. Furthermore, even though these innovations may be suitable for the specific individual purposes to which they address, however, they would not be suitable for the purposes of the present invention as heretofore described.

SUMMARY OF THE INVENTION

ACCORDINGLY, AN OBJECT of the present invention is to provide a vessel for separating and collecting excess oil from deep fried foods disposed therein before the deep fried foods are sauted that avoids the disadvantages of the prior art.

ANOTHER OBJECT of the present invention is to provide a vessel for separating and collecting excess oil from deep fried foods disposed therein before the deep fried foods are sauted that is simple to use.

BRIEFLY STATED, STILL ANOTHER OBJECT of the present invention is to provide a vessel for separating and collecting excess oil from deep fried foods disposed therein before the deep fried foods are sauted. A colander is rotatably mounted in a pot and holds the fried foods. A gear train operatively connects a motor to the colander. The motor is operatively connected to, and rotates, the colander to centrifugally force the excess oil from the deep fried foods out therefrom and collect in the pot. A handle is replaceably attached to the pot by apparatus that utilizes the weight of the handle to prevent the handle from detaching from the pot.

The novel features which are considered characteristic of the present invention are set forth in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of the specific embodiments when read and understood in connection with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

The figures of the drawing are briefly described as follows:

FIGURE 1 is a partially exploded diagrammatic perspective view of the present invention;

FIGURE 2 is a diagrammatic cross sectional view taken along LINE 2-2 in FIGURE 1;

FIGURE 3 is an enlarged diagrammatic elevational view of the area generally enclosed by the dotted curve identified by ARROW 3 in FIGURE 1; and

FIGURE 4 is an enlarged diagrammatic cross sectional view taken along LINE 4-4 in FIGURE 3.

LIST OF REFERENCE NUMERALS UTILIZED IN THE DRAWING

10	vessel of present invention for separating and collecting excess oil 12 from deep fried foods 14 disposed therein before deep fried foods 14 are sauted
12	excess oil
14	deep fried foods
16	pot for collecting excess oil 12 from deep fried foods 14
18	colander for holding fried foods 14
20	motor for centrifugally forcing excess oil 12 from deep fried foods 14 out therefrom and collecting in pot 16
22	gear train
24	handle
26	apparatus
28	bottom of pot 16
30	bearing of pot 16
32	bottom of colander 18
33	axis of rotation of colander 18
34	driven gear of gear train 22
36	drive gear of gear train 22
38	top of colander 18
39	top of pot 16
40	ring gear of driven gear 34 of gear train 20
41	through bore through pot 16 of gear train 22
42	front portion of handle 24
44	rear portion of handle 24
46	switch on rear portion 44 of handle 24
48	battery interface contained in rear portion 44 of handle 24 for electrically communicating with at least one battery 50 for powering motor 20
50	at least one battery for powering motor 20
52	two pair of key through bores through pot 16 of apparatus 16

54	upper portion of each key through bore of two pair of key through bores 52 through pot 16 of apparatus 26
56	lower portion of each key through bore of two pair of key through bores 52 through pot 16 of apparatus 26
58	inner surface of pot 16
60	four blind bores in inner surface 58 of pot 16 of apparatus 26 of apparatus 26
62	upper extreme of upper portion 54 of each key through bore of two pair of key through bores 52 through pot 16 of apparatus 26
63	two pair of studs of apparatus 26
64	heads of two pair of studs 63 of apparatus 26

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the figures, in which like numerals indicate like parts, and particularly to FIGURES 1 and 2, the vessel of the present invention is shown generally at 10 for separating and collecting excess oil 12 from deep fried foods 14 disposed therein before the deep fried foods 14 are sauted.

The vessel 10 includes a pot 16, a colander 18, a motor 20, and a gear train 22.

The colander 18 is rotatably mounted in the pot 16, and is for holding the fried foods 14.

The motor 20 is operatively connected to the colander 18, and rotates the colander 18 relative to the pot 16 for centrifugally forcing the excess oil 12 from the deep fried foods 14 out therefrom and collecting in the pot 16.

The gear train 22 operatively connects the motor 20 to the colander 18.

The vessel 10 further comprises a handle 24. The handle 24 is replaceably attached to the pot 16.

The vessel 10 further comprises an apparatus 26. The apparatus 26 replaceably attaches the handle 24 to the pot 16.

The pot 16 has a bottom 28 and a bearing 30. The bearing 30 of the pot 16 extends centrally upwardly from the bottom 28 of the pot 16.

The colander 18 has a bottom 32. The bearing 30 of the pot 16 extends centrally to the bottom 32 of the colander 18 so as to form an axis of rotation 33 about which the colander 18 rotates in the pot 16.

The gear drive 22 comprises a driven gear 34 and a drive gear 36.

The colander 18 has a top 38, the pot 16 further has a top 39, and the gear train 22 further has the pot 16 having a through bore 41. The through bore 41 in the pot 16 extends through the pot 16, just below the top 39 of the pot 16. The driven gear 34 of the gear drive 20 is a ring

gear 40 that extends horizontally and circumferentially around the colander 18, just below the top 38 of the colander 18.

The handle 24 is hollow, and has a front portion 42 and a rear portion 44. The front portion 42 of the handle 24 extends bulbously and communicatingly from the rear portion 44 of the handle 24, and is replaceably attached to the pot 16.

The rear portion 44 of the handle 24 has a switch 46 mounted thereon, and contains a battery interface 48. The battery interface 48 in the rear portion 44 of the handle 24 electrically communicates with the motor 20 through the switch 46, and is for electrically communicating with at least one battery 52 for powering the motor 20.

The motor 20 extends vertically in the front portion 42 of the handle 24, and has the drive gear 36 of the gear train 22 horizontally thereon.

The drive gear 36 of the gear train 22 passes through the through bore 41 in the pot 16, and engages the driven gear 34 of the gear train 22 so as to allow the motor 20 to rotate the colander 18 in the pot 16 when the switch 46 is activated.

The configuration of the apparatus 26 can best be seen in FIGURES 1, 3, and 4, and as such, will be discussed in reference thereto.

The apparatus 26 comprises the pot 16 having two pair of key through bores 52. The two pair of key through bores 52 through the pot 16 straddle the through bore 41 through the pot 16.

Each key through bore of the two pair of key through bores 52 through the pot 16 has an upper portion 54 and a lower portion 56.

The upper portion 54 of each key through bore of the two pair of key through bores 52 through the pot 16 is vertically elongated.

The lower portion 56 of each key through bore of the two pair of key through bores 52 through the pot 16 is circular and wider than the upper portion 54 of an associated key through bore of the two pair of key through bores 52 through the pot 16.

The pot 16 further has an inner surface 58, and the apparatus 26 further comprises the inner surface 58 of the pot 16 having four blind bores 60. Each blind bore of the four blind bores 60 in the inner surface 58 of the pot 16 is disposed concentrically with an upper extreme 62 of, and is wider than, the upper portion 54 of an associated key through bore of the two pair of key through bores 52 through the pot 16.

Each blind bore of the four blind bores 60 in the inner surface 58 of the pot 16 is circular, and has a width equal to that of the lower portion 56 of an associated key through bore of the two pair of key through bores 52 through the pot 16.

The apparatus 26 further comprises two pair of studs 63 with heads 64. The two pair of studs 63 of the apparatus 26 extend outwardly from the front portion 42 of the handle 24, terminate in the heads 64 thereof, straddle the drive gear 36 of the gear drive 22, and align with the two pair of key through bores 52 through the pot 16, respectively.

The heads 64 of the two pair of studs 63 of the apparatus 26 are larger than the upper portion 54 of the two pair of key through bores 52 through the pot 16, respectively, but smaller than the lower portion 56 of the two pair of key through bores 52 through the pot 16, respectively, so as to allow the heads 64 of the two pair of studs 63 of the apparatus 26 to pass through the lower portion 56 of the two pair of key through bores 52 through the pot 16, respectively, be lifted upwardly behind the upper portion 54 of the two pair of key through bores 52 through the pot 16, respectively, and be captured in the four blind bores 60 in the inner surface 58 of the pot 16, respectively, by virtue of the weight of the handle 24 tipping the heads 64 of the two pair of studs 63 of the apparatus 26 into the four blind bores 60 in the inner surface 58 of the pot 16, respectively, so as to prevent the heads 64 of the two pair of studs 63 of the apparatus 26 from dropping back down the two pair of key through bores 52 through the pot 16 and detaching the handle 24 from the pot 16.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of constructions differing from the types described above.

While the invention has been illustrated and described as embodied in a vessel for separating and collecting excess oil from deep fried foods disposed therein before the deep fried foods are sauted, however, it is not limited to the details shown, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute characteristics of the generic or specific aspects of this invention.